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REPORT ON INTERMITTENT FEVER IN CHELSEA.

[The following Report was read at a meeting of the Suffolk District Medical Society, held October, 1852, and ordered to be printed.]

The committee appointed to report on the subject of intermittent fever, as it has been said to exist, and to have originated, at Chelsea, present the following as the facts in the case, so far as the committee has been able to learn them, after making diligent inquiry of all the physicians resident in the vicinity.

Immediately after their appointment, the committee addressed a circular to Drs. Chase, Forsyth, Otis and Toomey, of Chelsea; Buck, of Boston; French and Gould, of Malden; requesting information upon the following points:—

1st. Whether they had ever seen or heard of another physician visiting a patient affected with intermittent fever, which had arisen in the neighborhood of Chelsea;

2d. Whether they had seen or heard of any anomalous fever, or any cases of severe dysentery, in the same locality;

3d. Whether any data existed, wherefrom one could learn the hygienic effects produced by the exclusion of the salt water from a portion of the territory belonging to the Winnisimmet Village.

Subsequently, letters were addressed to Drs. Hooker of East Cambridge, Sullivan of Malden, and Poole of Chelsea, &c., and the committee have received letters from, or have had personal interviews with Drs. Buck, Forsyth, Hooker, Poole, Sullivan, Toomey, Nye of Lynn, and Reynolds of Gloucester.

The information and results thus obtained, divide themselves into three classes.

First. The physical history of the spot supposed to have given origin to intermittent fever; with an examination into its present condition.

Second. The actual facts bearing upon the question of the origin of intermittents there; also other facts relative to dysentery, to which Chelsea seems more subject than other towns are.

Third. Some reflections upon the whole subject.

On these topics and in this order the committee will proceed to give the results of their investigations.

Winnisimmet Village is chiefly built upon a hill of gravel, similar to

those found in such numbers along the coast of Massachusetts Bay. It rests on a clayey bottom, and originally (i. e., before the erection of the dam to be hereafter described), at high water, formed a kind of peninsula, the chief eminences being Mount Bellingham and the lands occupied by the United States Naval and Marine Hospitals. Continuous with it, is a chain of four or five similar though somewhat loftier hills, running to the northwest and west, so as to almost completely invest, as with an amphitheatre, a tract of marshy ground, two hundred and seventy-five acres in extent, which lies to the west of the village, between it and Malden. The accompanying map, reduced by the committee from one made for the Land Company in 1846, will show this tract; the high-water mark showing its exact outline. On the eastern side of the village high-water mark may be in like manner seen. From these statements it will be perceived that the territory, above described as lying between Malden and the village, occupies a space quite equal to the whole of the original village lot.

In the year 1789 a charter was granted to a company, of which two eminent members of our profession* were among the chief associates, and whose object was to improve the marshy tract we have just referred to. To do this, they were empowered by the Legislature to build a dam on the spot where the present dam stands. They hoped to render the marsh capable of bearing good English hay, by thus shutting off the salt water. Accordingly the dam was built; but like many other speculations, it seems to have been a complete failure, and after vainly endeavoring to reduce the tough salt hay to some of a milder texture and of a more luxuriant growth, the project was abandoned. In 1816 the salt water was again allowed free access to the marsh, and this state of things continued until 1845, when, under the old act of 1789, the Ferry Company repaired the dam and again wholly shut off the sea, not for the purpose of cultivating the soil, but to bring it into the market for building lots.

It would have been interesting to learn whether any malarious influences were exerted during the interval between 1789 and 1816. The committee can give no answer to the question. It seems probable, however, that no intermittent fever was actually excited in any individual; *first*, because we have no record or tradition proving that idea—and *second*, because the number of residents near the spot was very small; so that if malarious influences existed, to a slight degree, it might have failed to find an object of attack. The following statistics, given to the committee by Mr. Fenno, the agent of the Winnisimmet Company, will show the small number of inhabitants in Chelsea formerly, and their very rapid increase during the past few years. In 1822 (i. e., twenty-three years before the *second* closing of the dam) there were 3 houses and 20 inhabitants. In 1850 (i. e., five years after that closure) are 1037 houses and 7636 inhabitants. And most of this increase has been recent; for the population, according to the census, has more than trebled since 1840.

* Drs. Danforth and Dexter.

The present condition of the land, cut off, as we have stated, from the sea for building, is as follows. The channel of the old river, marked by the interrupted lines on the map, can be easily traced throughout its whole course. It generally contains stagnant water. This is quite salt in its taste near the dam, but the farther we go from this part, the more brackish it becomes, until finally it is nearly or quite fresh. Some of the numerous springs, which flow from the surrounding banks, are quite warm; one of them never falling, even during winter, lower than 51° F. One of the committee examined the whole marsh during the middle of a day in July, 1851, and he made the following observations upon it. He found the bed of the channel as described, in some places for a long distance containing water; in others there were simply small pools. Most of these last were composed of dirty water, covered with a filthy scum, festering under the noon-day heat. Very few of them, however, emitted any perceptible odor. None of them completely filled up the banks of the river, and these last, wherever seen, were studded with the shells of dead mollusca, which were slain by thousands when their native element was shut off from them. Some of the pools adjacent to the dam had small fish in them. Usually there was nothing but the algæ, above described, on their surfaces; and near the edges of some, a coarse kind of grass was growing. Some pools were two or three feet deep. Others were two or three inches only, while, finally, the remainder were either wholly or in part dried up. In the former case they presented the aspect of a black, soft mud, with here and there a little water just preparing to be evaporated. In the latter was found a coarse, hard-baked, fissured surface. Between the branches of the channel, the soil was of a porous, elastic nature, on which was growing, sparsely, a kind of mongrel grass, between salt and the more delicate English grass, and the surface was with much difficulty traversed by the pedestrian in consequence of the frequent changes from water to mud, &c. Very little has, as yet, been done by the Company, except that a few roads have been built, but nothing towards levelling the district; and it seems to be the intention to leave this to be done by the gradual process of building. Comparatively few houses have been erected on the Malden side, and Gerrish's block (No. 3 on map) built two years since, is the actual (1851) limit of houses on the Chelsea side. This block was, till within a very short period, the only fine brick building on the place. All the rest were small, wooden tenements. But several large ranges of brick are now in the process of erection between Gerrish's and the village. It may be safely asserted, however, that seven eighths of the tract of land is still uncovered and in the condition above described. The Grand Junction Railroad runs through its centre, and the intention of the proprietors of it is to have a station-house upon the place.

The committee have dwelt, in this full manner, upon the past and present condition of the land, because they felt that such record was necessary in order to a full comprehension of the medical topography of the district, and in order that we have accurate data wherefrom to judge of the hygienic influences that have already been exerted, or may

hereafter arise in consequence of the peculiarity of the spot—which within twenty years will probably be covered with a dense population.

We now proceed to lay before the Society the second portion of our subject, viz., the actual facts bearing upon the question of intermittent fever having originated at Chelsea, and likewise other facts relating to the existence of dysentery.

And, first, in regard to intermittent fever, the committee believe that the following observations presented by Drs. Buck, Sullivan and Toomey, fully prove that this disease, or true fever and ague, has been excited since 1845, and probably by the present condition of the land; and, likewise, that the effects of the malaria still remain. To prove this, the following cases are presented.

CASE I. (under Dr. Toomey's care). A. B., æt. 21, never out of Massachusetts, or, that she is aware of, in any malarious region, resided at block marked 4 on the map; i. e., on the marsh, below the level of high-water line. Dr. Toomey saw her about May 14, 1847. She then miscarried, at the third month of pregnancy, and she continued doing well until 30th, when she was seized with a severe ague fit, lasting over an hour, succeeded by the hot stage, and finally by sweating for two hours. Dr. T. did not see her during this paroxysm, but requested to be called, if another occurred. The next day this actually happened, and patient was found complaining of chilliness along the spine, difficult respiration, acute pain in the temples and small of back; the countenance was pale, the skin dry and rough; tongue coated. A similar paroxysm continued to recur daily until June 11th. The treatment from June 2d, was a grain of quinine every two hours. On 12th no paroxysm occurred. It returned, however, on the 13th, and continued daily until middle of July, when it ceased.

Dr. T. regarded this case as one of true intermittent fever, occurring in a woman in good health before her abortion. The patient believed that her place of abode was unhealthy. Subsequently, she removed to No. 5 on the plan, but from that period she has been liable to a return of her paroxysms on taking cold. For these she uses quinine with relief.

CASE II. (attended by Dr. Buck). B. C., æt. 8 years, and who has never been farther from home than Salem, and who was residing at a spot (marked 6 on plan) about fifteen rods from high-water mark, and on the old country road leading to Salem, was seen by Dr. Buck, Oct. 1, 1847. He had been languid and cold for a few days; and after two or three visits, Dr. B. learned that he had had, on the day preceding, a severe chill, followed by heat and sweat. In order to be certain of its character, Dr. B. visited the patient at the usual hour of his chill, viz., at 11, A.M. The usual appearances of a paroxysm of fever and ague occurred, two or three days. It was of the quotidian type, and the patient was quite well in the intervals. Having satisfied himself of the nature of the complaint, Dr. B. prescribed quinine and morphine. One very slight paroxysm occurred afterwards, and the patient was well in five or six days.

The committee present this as another undoubted case of intermittent, whose origin was at Chelsea, and probably from miasmata arising from the adjacent marsh.

CASE III. (under Dr. Toomey). Dr. T. was riding to Malden, some time during the autumn of 1847, and while within the confines of the marsh near Malden, he was asked to prescribe for an Irish laborer who lived in a small house, situated at No. 2 (map). This house was built between two curves of the old channel of the river, and several hundred feet below the line of high water. Dr. T. learned that he had had, for several days, regularly intermittent paroxysms of chills, heat and sweat. Quinine was prescribed, with the direction that unless he got well he should call again on the physician. Dr. T. did not again hear from the patient, and no tidings could be gained of him. At the suggestion of the committee, Dr. Toomey made some inquiries about him, but he had left for parts unknown.

The committee are disposed to regard it as a case of intermittent. It is not, moreover, perfectly certain that it arose from the marsh; but inasmuch as he was a laboring Irishman, the presumption is that he had not travelled much in the interior of the country, so that the disease probably originated near the spot where he was taken with it.

CASE IV. (under care of Dr. Buck). This patient was a Scotchman, æt. 30, a workman in the dye-house at Malden. He had lived near the marsh for five years, and had not been in an intermittent fever country. When taken, he was residing on the margin of the marsh below high-water mark (No. 1, map). He had been seized with chills, heat and sweats, and had been liable to them for two or three months. When Dr. Buck was called to him, he was residing at Malden, about a mile and a half from the above-named place. Dr. B. sought, in vain, for some local disease to explain his accesses of intermittent fever. It was of the tertian type. Two grains of quinine, and one quarter of morphine, once in six hours, were ordered. Only one chill occurred afterwards, during Dr. B.'s knowledge of the case. He, however, after some months, fell under the care of Dr. J. L. Sullivan, of Malden. From the letter of this gentleman, it appears that, having had a relapse from the same difficulties, the patient had finally returned to Scotland. Whilst under Dr. S., the type was the same as before, and, at times, the fever caused delirium.

These are all the cases of fever and ague that the committee have been able to hear of, that seem to have arisen from the miasm of the marsh. About three of them, there can be no doubt; and of the fourth (No. III. in the list), when taken with the others, and with the direct evidence of Dr. Toomey, there seems to be but the slightest degree of doubt.

It will, therefore, be observed that from May, 1847, until now (Nov. 1851), i. e., from within two years after the reëstablishment of the dam, cases of genuine fever and ague have occurred within or near the limits of the former marsh. The small number of cases may seem to render these results of little moment in their relations to science or public hygiene. Your committee cannot view the subject in this light, because, first, these are the only well-authenticated cases of intermittent fever, that have originated in the vicinity of Boston. In this remark the committee, of course, exclude the very interesting fact reported by

Dr. Holmes,* on the authority of Dr. James Jackson, to have occurred in Boston, and about which there may be a reasonable doubt whether it were a case of genuine intermittent fever.†

Second. These facts become interesting from the very grave suggestions they afford as to the healthfulness of the spot as a place of residence. It will be remembered that the whole has been laid out for sale as house-lots, but that, as yet, only a small part of it has been built upon. The question may arise, what will be the effect of this marsh upon the future health of Chelsea. It seems impossible to do more than speculate upon the probable result. Doubtless, when all the bed of the river has been filled, complete drainage has been established, and the land shall be covered with good substantial dwellings, the probability is that the cause of intermittent will subside; but the Society will be able to judge, as well as the committee, what are the prospects before that time. There will be many alternations of heat and of moisture, before that period will arrive. Watson‡ says these alternations, on such a soil, are most favorable to the production of fever and ague. Time alone will determine the question in the present case.

The indications in the case of any particular patient, who, in that region, tends to have any periodical attack, is undoubtedly an early removal from the town; for it will be remembered that A. B. still suffers from attacks of intermittent fever, although she removed a long time ago from the immediate neighborhood of the marsh. Similar suggestions arise from the case of the Scotchman (Case IV.).

In regard to the second part of their inquiry, viz., whether any severe dysentery has prevailed in Chelsea, and in the vicinity of the marsh, the committee have some important facts to communicate.

Dr. Toomey states that in the year, 1847, i. e., two years after the dam was closed, he saw more fatal cases of dysentery than he has seen before or since.

Dr. Forsyth, entering more into detail, writes thus:—"During the years 1848 and 9, dysentery prevailed to an unusual extent. In 1848, it seemed more fatal on the south side of the marsh than in any other part of the village. In some families, several individuals were sick at the same time, and, in one instance, three died in one family within forty-eight hours. The north side, which is in Malden, was that year exempt. In 1849, malignant dysentery visited every house, or nearly every one, bordering on the marsh on the Malden side, and was very fatal; the young, the aged, and the infirm falling victims, while the middle aged and vigorous recovered after a prolonged and severe illness. In some cases, congestion of the capillaries took place in twelve or twenty-four hours after the attack, followed by collapse and death in two or three days, without sufficient evidence of a drain upon the system to account for it." Since that time, according to Dr. F., Chelsea has been quite healthy. The same gentleman likewise incidentally states that,

* *Indigenous Intermittent Fever of New England*, page 84.

† Since writing this, the committee have been reminded of a case of intermittent fever reported by Dr. W. H. Thayer, as having originated in Boston. [See Appendix.]

‡ *Lectures*, Am. Ed., p. 404.

though malignant scarlatina has prevailed in the higher lands of Chelsea, the low lands have been almost wholly exempt from the severer forms of it.

From these statements it would appear that, within three years after the closure of the dam, very malignant dysentery prevailed in the neighborhood of the marsh. We might possibly have inferred that such would be the fact, from similar results recorded by Dr. Holmes in his admirable treatise* already mentioned (pp. 75, 102), also that reported by Lemuel Shattuck.† Our inference would be wrong, however, if we should suppose that the malignant dysentery, described by Drs. Troomey and Forsyth, was occasioned wholly by the sudden re-closure in 1845. In table No. 1 (below) we see that in 1848 and 9, this disease prevailed throughout Massachusetts, and that in 1849 the State at large and Gloucester suffered about as much as Chelsea, and that Lynn really lost more persons by dysentery than any other place recorded in the table. An epidemic, in fact, was sweeping the State; and although, as we shall see, the dam has probably been producing, for several years past, a dysenteric atmosphere about Chelsea, the final closure of it was not the sole cause of the disease described by the above-named gentlemen.

TABLE I.

Year.	MASS.			BOSTON.			CHELSEA.			LYNN.			GLOUCESTER.		
	Whole No. Deaths.	Deaths by Dysentery.	Per centage.	Whole No. Deaths.	Deaths by Dysentery.	Per centage.	Whole No. Deaths.	Deaths by Dysentery.	Per centage.	Whole No. Deaths.	Deaths by Dysentery.	Per centage.	Whole No. Deaths.	Deaths by Dysentery.	Per centage.
1841							61	7	11.4						
1842	9544	213	2.2				100	5	5.0						
1843	10684	274	2.5				64	6	9.3						
1844	8838	120	1.3				94	8	8.50						
1845	3844	200	5.2				58	4	6.9	200	1	0.5	121	0	
1846	9350	122	1.3	3086	52	1.6	68	11	16.1	205	5	2.4	139	1	0.7
1847	11063	410	3.7	3853	222	5.7	110	13	11.8	233	0		160	9	5.6
1848	11346	1074	9.4	364	278	7.5	110	26	23.6	207	5	2.4	144	13	9.0
1849	20062	4580	22.8	5079	277	5.5	175	40	22.5	310	117	37.7	181	41	22.6
1850	16606	1188	7.1	3667	136	3.7	126	23	18.2	288	21	7.2	214	20	9.3
To Dec 1851							116	9	7.7	263	9	3.4	163	15	9.2
Totals.	105837	8181	7.66	19349	965	4.9	14800	982	15.07	1726	158	9.1	1122	99	9.1

A glance, however, at the same table will show that during the interval from 1842 to 1851 inclusive, Chelsea has, with one or two exceptions, always had a vastly larger proportion of deaths from dysentery

* On Intermittent Fever in New England.

† Report of Committee on a Sanitary Survey of the State.

‡ None reported.

§ This number is doubtless too large. See Dr. Reynolds's letter on the subject.

than Massachusetts, Boston, Lynn or Gloucester. By the totals of all the years, this becomes still more manifest. From them we perceive the per centage of deaths by dysentery in Massachusetts, Boston, Chelsea, Lynn and Gloucester, compared with whole number of deaths in each. The table was made from the State and City Registrations, and from letters from Drs. Toomey, Nye and Reynolds. The committee cannot pretend that, in all its details, there may not be some errors; but, according to the doctrine of chances, these errors would not be so much against Chelsea, on all occasions, as they appear from the table.

Some may ask, whether the dam is really a cause, since dysentery seems to have prevailed before the second complete closure in 1845. The committee, however, do not adopt this view, but believe that the obstruction to the free flow of the salt water over the marsh, caused by the dam, even when imperfectly closed, has been sufficient to produce the effect. For it should be remembered that the major part of this obstruction has existed since its first erection in the last century, and that only a comparatively small outlet, through the central gate-way, has been allowed since 1818. It is evident, therefore, that very great restraint must have existed to the flow or ebb of the tide, although no positive re-closing took place till 1845. The result, at which the committee thus arrives, viz., that Chelsea is peculiarly predisposed to dysentery, suggests the importance of future investigations upon the same subject; and it is hoped that the physicians resident there will bear it in their minds during their daily practice, and report to the Society thereupon.

It would be wrong, however, to infer from these facts that Chelsea is absolutely a more unhealthy spot for a residence than other towns. There would be no reason for such an assertion. Perhaps these very malarious influences may prevent some other diseases from being so prevalent as they would otherwise become. The next table (No. 2), obtained from the sources above named, may throw some light on this subject.

TABLE II.

<i>Per centage of Deaths, annually, to the whole population of</i>					
DATE.	MASS.	BOSTON.	CHELSEA.	LYNN.	GLOUCESTER.
1842	1.09	2.33	3.31		
1843	1.32	1.95	1.04		
1844	1.02	1.89	2.47		
1845	1.03	2.04	1.12	1.73	1.71
1846	1.06	2.59	1.41	1.70	1.93
1847	1.20	3.10	2.04	2.01	2.13
1848	1.20	2.84	1.65	1.57	1.92
1849	2.06	3.79	2.57	2.26	2.02
1850	1.66	2.64	1.65	2.02	2.70
Avr. ann. per cent'ges	1.29	2.57	1.91	1.88	2.07

From this table it appears that, during the period included between 1845 and 50, Chelsea, though less healthy than the State at large, was more healthy than Boston; and quite equal, to say the least, to Lynn and Gloucester. By the average annual per centage, Chelsea stands in the centre of the five.

General Summary of the Facts contained in the Report, and the Inferences therefrom.

First.—In 1789 a dam was erected at Chelsea, whereby the salt water was cut off from two hundred and seventy-five acres of land adjacent to the village. From this period until 1816, various ineffectual endeavors were made to reduce this tract to cultivation. Finally, this plan was given up in despair, and the water again allowed to overflow the land; but of course it could not do so as easily and effectually as before, owing to the fact that there was only a narrow sluice gate through which the tide was compelled to ebb and flow. In 1845 the gate was again closed, and has remained so ever since, whereby the old bed of the river and a large space of porous earth were left exposed to the rays of the sun and with a southern exposure.

Second.—It has been proved that certainly three, and probably four, cases of genuine fever and ague have arisen either on, or very near, the edge of the partially dried up marsh, and this since 1845, when the dam was finally closed. As these are the only well-authenticated cases* of indigenous fever and ague in this vicinity, and as similar results from similar causes have occurred elsewhere in Massachusetts, we infer that the dam has been the exciting cause of their appearance.

Third.—Chelsea has been more liable to dysentery than other places, as far back as any statistics will carry us, and since 1845 this tendency has been augmented. From these statistics we learn that Chelsea is about three times as subject to the malady in question as Boston, and twice as much as the State at large, Lynn and Gloucester.

Fourth.—Notwithstanding Chelsea is thus subject to the influence of fever and ague and dysentery, it is not a more unhealthy place of residence than the other towns with which it has been compared. The statistics of table 2 prove this.

Fifth.—May not the curious fact that Chelsea is more liable to fatal dysentery than other towns, while, at the same time, its annual percentage of deaths to the population is only equal to, and in some respects less than, the annual per centages of these same towns; may not this fact be an illustration of the great law of compensation which governs the liability of communities and nations to disease and death? Does it not point to the inference that while certain influences tend to excite certain diseases, these same influences may check the development of others?

Sixth.—One final inference, of a very evident and practical character, the committee would make in concluding their report. It is as follows—Whenever any patient in Chelsea seems to have a tendency to diseases of an intermittent type or to dysentery, it becomes the duty of the medical attendant to think of the propriety of removing him from the deleterious influences exerted on him.

HENRY I. BOWDITCH,
JOHN WARE,
EPHRAIM BUCK.

February, 1852.

* See exceptions to this. [See Appendix.]

APPENDIX.

After this report was presented to the Society, the committee were informed of the following very important case. By the kindness of Dr. W. H. Thayer, the committee are enabled to present it, as drawn up by him from his original notes.

Sept. 30, 1850.—John Mason, *æt.* 12. School-boy. Eliot st. Has lived with his present guardian since six months old. Birth-place unknown. Has not been out of city over night since 2 years old. Always lived where now does, between Washington and Tremont sts.

Rather puny. Witnessed display of fireworks on 18th inst. on the common, sitting on the ground. The evening was too cool to sit in the house with open window, and there was a dense fog. The next day, having been previously well, had a chill in the afternoon, followed by heat, and that again by sweating. The next day (20th) he visited the Mechanic's Exhibition, was much fatigued, and had a more severe exacerbation of the same character than the day before.

The same attack has been repeated every day since, the chill being from 5 to 6½, P.M., followed by great heat, which ends by profuse sweating at 11, P.M. With the paroxysm comes headache, pain in neck and across small of back. At the first attack he had nausea—none since. He has lost strength and appetite, is very thirsty during heat; is up all day.

Now—Sept. 30th, 1, P.M. Up and dressed. Pale; cool; *p.* 70; tongue nearly clean; has no pain. During paroxysm, has some cough, which gives him a little pain in chest. None now. Nothing abnormal discovered on auscultation. Has taken a cathartic since first attack. No other treatment. One dejection daily. *R.* Quiniae sulphatis, *gr.* jss.; acidi tartarici, *gr.* ʒ. M. Three times daily, avoiding paroxysm. Cold sponging during heat.

Paroxysms occurred as usual on the 30th of Sept. and first of October. On the first, without any pain in neck and loins.

On the 2d October, chill from 9½ to 10, P.M., followed by heat till 2, A.M. Pain in neck and back severe. On the 3d October, no chill—but heat from 1 to 5, A.M. of October 4th. Quiniae *s.*, *gr.* ij. four times daily.

Oct. 5th.—No chill nor heat. Sweating began at 2, A.M. and was profuse.

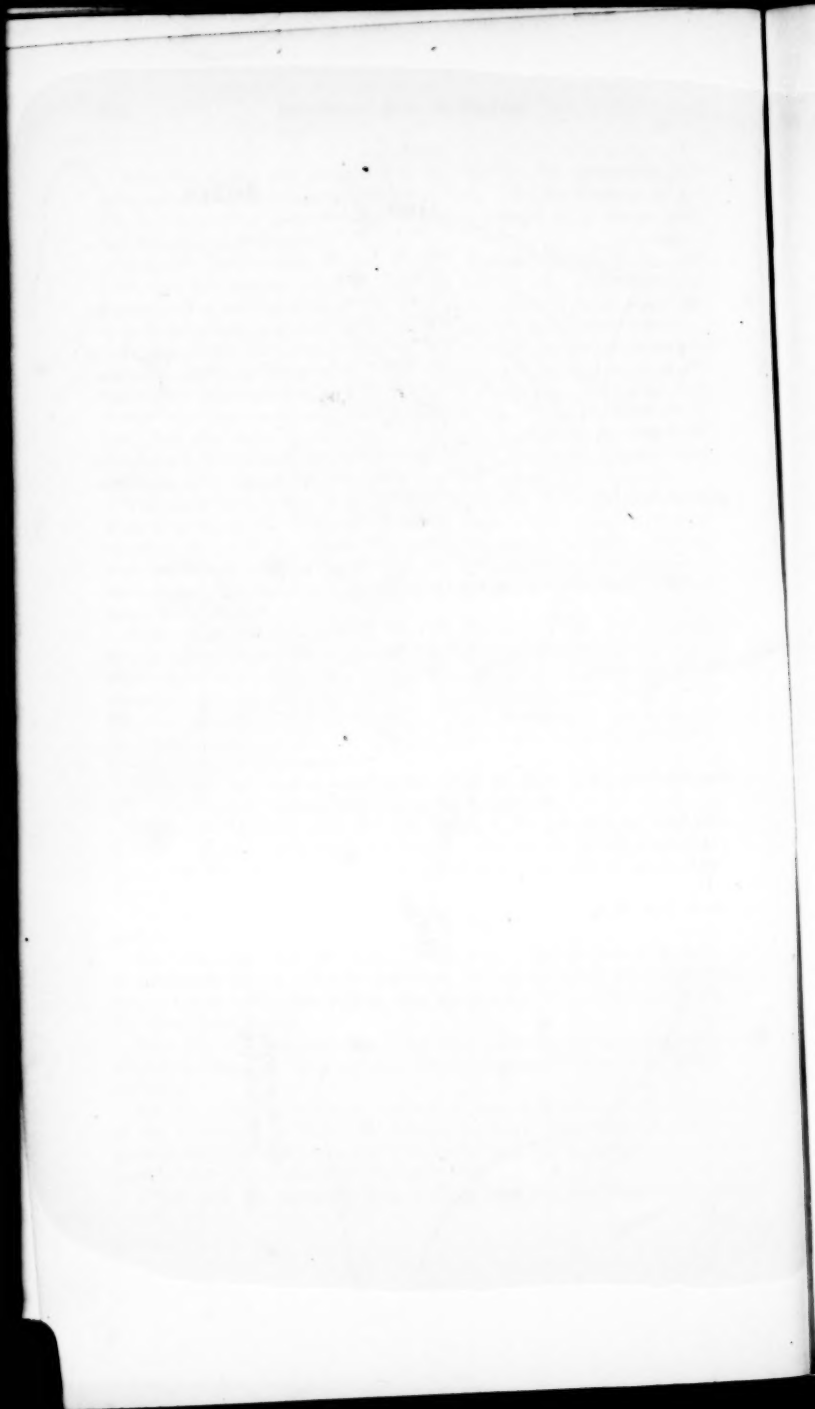
6th.—No chill, heat nor sweat. Feels well. Spleen cannot be felt; no tenderness over it. There was some tenderness across upper abdomen at the first visit, but spleen was not searched for. One *dej.* daily. Pill three times a-day.

9th.—No chill nor heat since last visit. Sweats freely every night, but this is his habit. Is at school. Mother reports him very well. Omit medicine.

By the following still more curious document, brought to the notice of the committee by Dr. Z. B. Adams, we have undoubted proof that genuine intermittent fever formerly prevailed, and was quite fatal on some parts of the eastern shores of Massachusetts.

These data are extracted from a diary kept by the Rev. Noadiah





Russell in 1682 and 3, while a tutor at Harvard College. By the College Catalogue this gentleman appears to have received his degree of A.B. in 1681. He died in 1713. When writing his diary of everyday events, he scarcely could have hoped to have been the means of illustrating the history of disease in New England. The original diary, fragments of which alone remain, is now in the possession of his descendants, and has been recently published. (See Drake's New England Historical and Genealogical Register, &c., January, 1853, page 53.)

"16th day 6 month (Aug 16, 1682) * * * The next day being "Fryday I went to wait on some company to Lynspring where for company's sake drinking too much cold water I set myself in an ague wch "came again on Sabbath day and Tuesday.

* * * * *
 "10 6 (Aug. 10, 1683) Samuel Gardner a student of ye College, of "2 years standing prompt for learning exemplary for piety and Sobriety died at Salem of ye feaver at which time many were visited with "ye feaver and ague which was very mortal."

DR. CARPENTER'S VIEWS OF THE RESPIRATORY FUNCTION

BY E. LEIGH, M.D., TOWNSEND, MASS.

[Communicated for the Boston Medical and Surgical Journal.]

DR. CARPENTER is one of the few and more recent physiologists (referred to on page 437 of this Journal), who have freely extended their comparisons into the inferior divisions of the animal kingdom. The earlier editions of his works on "comparative" and "human" physiology were marked by this characteristic, and are indebted to it for much of their merit. Yet, after all his comparisons of the higher and lower animals, he treats of this function merely as a calorifying and decarbonizing process. He barely *alludes* to the fact that oxygen is also necessary to give the blood its power to nourish and stimulate the tissues—that, without it, this fluid is not fit for its normal action.

But in the third edition of his "Comparative Physiology," 1851, he has availed himself much more largely of the respiratory phenomena observed among all organized beings, and his conclusions correspond to a considerable extent with those of the essay on this subject recently published in this Journal.

He shows (§ 441) that the "crude aliment must be exposed to the air before it is fit for its ultimate purpose," and that which has once passed through the tissues must undergo a similar process to restore it to its proper condition; that the "presence of oxygen is necessary to the active performance of the animal functions by the nervo-muscular apparatus;" see also § 451—that it is "essential (§507) to the changes of the tissues in the development of muscular force and nervous energy"; and is "one of the conditions (§235) of muscular contraction"; see also §236.

In §§67, 494, 509, and elsewhere, he treats very *fully* upon this sub-

ject, showing that oxygen has a direct and most important agency in the processes connected with the growth of the tissues, their decay and reconstruction, as well as with the development of muscular and nervous activity (why not of *all* vital action ?)—showing also that its presence and influence is necessary to the generation and transformation of the organic compounds contained in the circulating fluid and constituting its nutrient material, and he refers to the conversion of starch into sugar, and of albumen into gelatine, as instances. Speaking of this use of oxygen, he considers it (§67) as properly entitled to the name of *food*.

Such views of the nature of the respiratory function are of the highest importance, and will be more fully developed in their scientific and practical relations, as the functions of all animals are more extensively and thoroughly investigated—the phenomena, thus observed, more carefully compared—and their significance more deeply studied, in their relations to life, health, disease, and restoration.

OSSIFICATION OF THE PLEURA.

BY SAMUEL W. JONES, M.D., LEBANON, ME.

[Communicated for the Boston Medical and Surgical Journal.]

ON the fifth day of this month I was called upon to make a post-mortem examination of a patient who, it was said, had been for several years laboring under an organic affection of the heart. Upon removing the anterior parietes of the thorax, I at once perceived that the left cavity of the pleura was enormously distended with some kind of fluid. The heart was pressed far out of its proper location, and occupied about the same position on the right side as when in a healthy state it should have done on the left. By a careful and tedious process of dissection, I was enabled to break up the adhesions and separate the pleura costalis from the ribs on the left side, and from the diaphragm below, and remove the sac entire from the thorax. After its removal I found the lung belonging to that side attached and strongly adherent to the superior and internal part of the sac. The lung was nowhere more than one and a half inch thick; was entirely impervious to air, and completely, throughout, *hepatized*, or, perhaps, to speak more scientifically, *carnified*. Its circumference of attachment to the distended pleural sac was in diameter about four by five inches. The sac was everywhere very much thickened and very firm and strong, and had upon its inner side a deposit of what I supposed to be coagulable lymph in an unorganized state. This deposit was thick all over the inner surface of the sac, being about one line in thickness. I had no means of applying to this deposit the microscopic test, so that I am unable to speak with certainty as to its nature. The sac contained five quarts, by measure, of a slightly yellowish fluid, having a very few flakes of a coagulable matter of some kind floating in it. That part of the sac to which the lung was adherent was *strongly ossified*, so that it could not be easily cut with the common scalpel. A few other spots of ossification were found in different portions of the sac.

There was a very small quantity of fluid found in the pericardium. The heart showed no signs of disease, with the exception, perhaps, of a very small amount of hypertrophy. Its openings and valves, so far as I could discover, were in the natural and healthy condition. The right lung was much smaller than natural; and though capable of being inflated to some extent, showed marks of both recent and long standing disease. To the inferior half the pleura was adherent from the effects of inflammation which probably had taken place some time ago. The upper portion of this lung was in a state of recent inflammation, which probably was the closing scene of diseased action in the life of this man.

What struck me in this case as being interesting and unusual, was *the very large amount of the accumulated fluid* and the ossific deposit in the pleura. I have no recollection of seeing any case of ossified pleura reported in this country. I believe Dr. Watson, of England, has such a specimen in his possession.

Always feeling an interest in, and having a desire by what little means I may have in my power to contribute to the stock of knowledge belonging to the profession, I send you the foregoing, of which you will please make such use, if any there can be made of it, as you shall think proper.

Never having seen the patient before his death, I am also unable to give you a history of the case. I should, however, hope, if I had had the opportunity of seeing it before death, that I should have been able to have made a diagnosis a little nearer the truth than the one which is said to have been made in this case.

January 8, 1833.

DR. BOND'S SPLINT FOR FRACTURE OF THE RADIUS.

[We give, below, some of the directions presented by Dr. Bond to the Philadelphia College of Physicians, for the use of the splint referred to in this Journal of the 12th inst. It may be well to mention that Dr. Hays suggests, in the last number of the American Journal of the Medical Sciences, a substitute for the splint of Dr. Bond in fractures of the lower end of the radius. He thus describes the simple manner in which he has made it. The cover of a cigar box being cut into a proper shape, a double layer of cotton wadding was laid over it. A strip of muslin, six yards long and three inches wide, was rolled up to within two yards of its end, and then a pin placed at each edge, not opposite to each other, but one a little nearer to the end than the other, so that the roll made, with the straight piece, an angle, the same as that made by the bottom of the splint with its front edge. The roll was then placed on the end of the splint, the strip carried over the back, then turned over the front, over the roll, and again to the back, when the angle gave to the strip a direction which carried it over the edge and in front of the roll to the opposite edge. The strip was then continued over from edge to edge until the whole splint was covered. The following is Dr. Bond's account of his apparatus.]

1. With a light board, of proper thickness for a splint, take a profile

of the well fore-arm and hand of the patient, placing the hand in its habitual inclination towards the ulnar side of the arm, and extending the profile from the elbow downwards, so that it shall reach the second joint of the fingers on the inside, when these are moderately flexed—as much flexed as they are when the points of the thumb and fingers are brought into contact. The lower end of the board must be cut off obliquely (at an angle of fifteen or eighteen degrees) in a direction corresponding with that of a body grasped in the hand, when the hand is inclined to the ulna, as above indicated.

2. Cover the board, thus prepared, with sheeting, or other strong fabric. This may be done by winding around it, from end to end, a narrow rolling bandage, covering all of it as nearly as may be, with few or no duplications. This is the most expeditious method. A neater one is to cut a piece of sheeting, of the general form of the board, but extending beyond the board on every side, and fastening it upon the board either by a few stitches, drawing towards each other the overlapping edges, or gluing down those edges upon that side of the board which is to be towards the arm, and which edges are to be covered with the pasteboard.

3. Prepare a block of soft, light wood, from seven eighths to eleven eighths of an inch thick, and from two to two and a half inches wide, according to the size of the patient's hand, and of a length corresponding with the width of the board in the palm of the hand. This block is to be carved and rounded, so as to adapt it to the form of the hand, and make it easy for the thumb, and in the grasp of the hand when it is placed on the board. It is to be fastened there by screws or nails, so that the remote edge of it shall correspond exactly with the lower oblique end of the board.

4. Upon that part of the board not covered by the palm-block, fasten, by means of small carpet tacks, a piece of book-binder's pasteboard, extending on each side beyond the edges of the board about an inch. If the pasteboard be very thick and stiff, make a slight incision in it along the edge of the board, in order to bend more easily the two projecting portions of it, thereby making a kind of box for the lodgment of the arm.

It seems to me that this splint, or one constructed on the same principles, will meet the above-mentioned indications in the following manner:—First, The form given to the board retains the hand in its habitual inclination towards the ulnar edge of the arm, accomplishing the object aimed at by Dupuytren's *attelle cubitale*, with as much certainty, with more simplicity, and more comfort to the patient. Second. The palmar block retains the hand in its habitual inclination backwards, and it gives the fingers that moderate flexion which most relieves the muscles from tension, and likewise that position which, if stiffness should result, will not only save the hand from a most inconvenient, ungraceful deformity, but will reserve to it the power of performing very many of its most frequent and useful functions. In addition to these advantages, this block contributes much to the comfort of the patient. Third. The object in covering the board with a strong fabric, as above described, is to retain

the bandage with certainty in its place, without applying it with a dangerous tightness ; for, by fastening the roller to this covering with pins, the surgeon need never have his patience tried by finding his dressing deranged, at his next visit. I can speak with confidence on this point, from having used it repeatedly in cases where this quality was fully tested. Fourth. The pasteboard is not an essentially necessary part of the splint, but it will be found to contribute to the comfort of the patient and the convenience of the surgeon.

The requisites for dressing with this splint are flannel or other soft fabric, to cover or line the inside of the splint ; two compresses ; a roller ; sometimes, but not always, a dorsal splint.

The flannel or other fabric with which the splint is lined should extend a little beyond the edge of the pasteboard, and the same piece may be extended over the palmar block ; but it will be better to cover this block with a separate piece. For this purpose take a piece of flannel large enough, when it is doubled, to cover the block. Through the doubled edge, with a proper needle, carry a small string (such as ligature-twine), and tie this around the splint immediately above the block. The covering of the block thus applied may be conveniently changed, without removing the arm from its bed.

Two compresses will generally be required : the anterior or palmar, and the posterior or dorsal. The proper construction and application of the former of these are a most important point in this dressing, and certainly not less so when long, straight splints are employed ; and deformity of the radius or wrist will most frequently result from negligence or want of skill in its use. If the compress be deficient in thickness, and the bandage be applied with its usual tightness, there will not fail to be either a curvature forwards, or a sigmoid flexure, which are the usual deformities. If the thickness of this compress be excessive, there may be a curvature backwards, which I think seldom occurs ; but there will be such undue pressure by such a compress as to increase the danger of adhesions, and to aggravate the discomfort of the patient.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JANUARY 26, 1853.

Prisons in Canada East. — In Canada an inspector is appointed by the government, to examine the prisons, jails, &c., and report upon the state of discipline, management, and even the expenditures. Wolfred Nelson, M.D., whose name is familiar to American ears, was inspector last year, and his report has been published. There is no place where medical men are more needed for such labor and investigations, than in the U. States, and no country in the world where they are less employed in that way. They are not even made coroners, where, of all men, they would be best qualified to accomplish the ends of justice. Dr. Nelson's report for 1852 is voluminous. Nothing seems either to have been over-

looked or neglected by the indefatigable inspector, for performing the duties of which we trust he was well paid. The document is creditable to the Canadian government. Humanity tempers the law, and all interests of the prisoner are watched over with a vigilance that insures kindness and order in the jails, penitentiaries and similar institutions of the country. Of course we cannot do any thing like giving the report of Dr. Nelson that examination which it merits. The subject of health in prisons is well discussed in some parts of the document. His observations on light, heat, ventilation, water, privies, and juvenile delinquents, are profound, and demand a future consideration.

Kirke & Paget's Physiology.—A second American edition of this very useful and economical work, by men of established fame, is indicative of a growing taste for research into the philosophy of functions which belong to the living body. It is inexcusable to grope through life in this age of intelligence, and remain in ignorance of the discoveries which are constantly being made in physiology. We are startled at new combinations in mechanism, and view with pride and admiration the discovery of new principles in the arts; but those who contemplate with pleasure and reverence the beautiful harmonies in organized beings, and who look from nature up to nature's God, are indeed few in number, compared with the multitudes who entertain no marked regard for the wonders of creative power that meet us on every side. This volume is a duodecimo of 568 pages, with 165 illustrations; and one of the evidences to be adduced of its good reputation is, that Messrs. Blanchard & Lea, of Philadelphia, who rarely send forth a bad book, are the publishers. They say, in their preface, "the principal change will be observed in the introduction of a large number of new and superior illustrations, which it is hoped will render the facts advanced more easy of comprehension by the student." On account of a former notice of the character and specific claims of this excellent volume, it is unnecessary to give a description of the topics embraced in its nineteen learnedly written chapters. Students would be profited by a study of this treatise.

Pharmacology.—A second number of Dr. Tully's prosperously commenced publication abounds with things that could only have originated in long study and experience, and a highly cultivated intellect. The contents embrace the consideration of the following subjects, viz.: non-absorption of medicines into the system; digestibility of medicines; transcendancy of medicines; and incompatibility of medicines, chemical and medicinal. This is a proper period for ordering the proposed series, which, from the reputation of Dr. Tully, have the prospect of an extensive circulation.

Dr. Bigelow's Thesis.—The name of Bigelow is well and favorably known to the medical community, in connection with varied talents and attainments. This paragraph refers to Dr. Samuel Lee Bigelow, now residing at Paris, who will be recollected in connection with the invention of collodion, some few years ago. We have received, with his compliments—Thèse pour le Doctorat en Médecine, présentée et soutenue le 5 Aout, 1852, par Samuel Lee Bigelow, né à Boston, Etats Unis d'Amérique, docteur in médecine, &c. &c. Recherches sur les Calculs de la

Vessie et sur leur Analyse Micro-chimique. To the honor of the enterprising author, he has dedicated the discourse to his father and mother. "A mon pere et a ma mere. A J. W. B. Gratitude et amour fraternel." Accompanying the thesis is an atlas of eight sheets of lithographic plates, illustrating, by magnified drawings, the appearance of the crystals of uric acid, &c. &c., which is not only very novel, but it shows that young America is beginning to make exhibitions of native talent and mental activity in the midst of the most accomplished medical scholars of Europe. Some one remarked, the other day, that Dr. Bigelow would probably establish himself in Paris as a practising physician. Such a location would be a suitable one for developing those original powers which have led to high expectations among those who know him best, and who have the strongest confidence in his ability to become eminent in a profession in which there is yet so much to be learned.

Hand-books of Philosophy and Astronomy.—There is an essential difference between the stars and the pulse. Although we cannot always reason philosophically in regard to medicine, or refer to the laws of natural philosophy for the solution of vital phenomena, it is quite important for every man, whether a physician or not, to possess at least a general knowledge of these sciences. They are accomplishments, if not absolutely necessary. Thoughts like these were suggested by an examination of a small volume, from the press of Blanchard & Lea, prepared by that celebrated savan, Dionysius Lardner, a man of vast attainments in science, notwithstanding the historical facts connected unfavorably with his morals. The Hand-book embraces the subjects of heat, magnetism, common electricity, and voltaic electricity, illustrated by upwards of two hundred wood engravings. In our day, medical men are continually experimenting with these mighty forces, for various purposes, and making discoveries of immense service to humanity. This book has the freshest intelligence, if settled principles can be thus denominated. It is learning made easy, and would be an appropriate addition to any medical library.

Anatomy and Diseases of the Horse.—We understand that Dr. Slade, of this city, has accepted an invitation to deliver a series of lectures upon the anatomy and diseases of the horse, before the State Agricultural Society. He commences on Friday evening next, in the Hall of the Representatives at the State House.

Novelties in Medicine.—There are new things in medicine, as in other departments of human knowledge; if there were not, it would be a science without progress. But very much that is novel, is not worth having. New medicines and new methods of medication, should be received with extreme caution. Life and health are too precious to be sacrificed or endangered; and no new prescription, therefore, is warrantable that has not had the approbation of a sound-minded practitioner, or been tested by the person who orders it. The leading desire should be to do good if possible, but never risk the danger of doing harm through ignorance.

Recipe for Royalty.—Macaulay gives the following as the medical treatment of Charles the Second, during his last sickness. All the medical men of note were summoned, and one of the prescriptions was signed by

fourteen doctors. "He was bled largely, a hot iron was applied to the head, and a volatile salt extracted from human skulls was forced into his mouth." He survived this treatment four days.

Belladonna vs. Yellow Fever.—In the voluminous proceedings of the Board of Health at Demarara, we see that Dan. Blair, M.D., Surg. General of British Guiana, addressed to the president a communication, requesting to make an experiment on the sick, the yellow fever being then extensively prevalent, with a view to establishing the fact that *extract of belladonna* is a prophylactic of extraordinary power. Here follows a part of his letter, but we are unable to say whether his plan was adopted.

"If the Board consent to a trial of this prophylactic it would be prudent to conceal from the public its experimental character, else an impaired confidence in its efficacy might cause a negligent observance of the necessary instructions. It would be well to provide printed schedules to be filled up with the name of the ship or vessel, and tonnage, the names, age, and native country of the sailors and officers subjected to treatment, and the date of the commencement and termination of the treatment, and a column for remarks. One such paper to be supplied to every vessel in the harbor by the harbor master, health officer, or superintendent of aid-waiters, or any officer appointed by the Board, which shall be re-delivered on board to such officer within fourteen days, who shall verify its statements, as far as he is able, before forwarding it to the Board. The same officer should deliver the requisite parcels of medicine to the ship-masters. It might be well to provide the pilots at the Light-ship with medicine and any instructions issued by the Board, so that ship-masters may command the use of the *protective fluid* before the vessel enters her infected moorings. The dose which I propose to give, is the *one-sixth of a grain* thrice daily, and continuous for twelve days, or until a rash appear on the skin; and to be given in the daily allowance of grog, or any beverage which in *temperance* ships may have superseded that allowance; and for the sake of certainty in the administration and accuracy in the dose it should be invariably given by the captain, or, in his absence, the mate. I propose to furnish all the medicine required from the dispensary of the public Hospital, and so mixed with water that — drops will contain exactly the *one-sixth of a grain* of the active ingredient; and it will be delivered to the health officer or any other officer nominated by the Board, in such quantities as may be required. I would propose that a label containing the directions for use, headed "*Protective Fluid*, recommended by the Central Board of Health of British Guiana, for the prevention and mitigation of fever among the shipping," be printed and pasted on each vial containing the medicine issued to the shipping.

Bequest to a Medical College.—Leissing, a leading German actor, died recently. By his will, he leaves all his fortune, which was considerable, to the charitable institutions of Frankfort. In that document, he states that he has been tormented all his life with the idea of being buried alive, and, in order to avoid any risk of such a contingency, he ordered that as soon as his death should be declared by the competent medical authority, his skin should be flayed from his body from head to foot, and that the skin so taken off should be given to the Museum of Natural History of Frankfort. In his will, M. Leissing named the surgeon who should perform the

operation, and left a large sum as his compensation. The Museum was applied to, to know whether it would accept so strange a bequest; it replied affirmatively, on condition that the skin should first undergo the treatment necessary for its preservation. The Tribunal of Premiere Instance then sanctioned the will.

Middlesex East (Mass.) Medical Association.—This association met on Wednesday evening, the 19th, at the house of Dr. Poland, in S. Reading, and adopted a revised fee table and code of medical police. Among other things it was agreed to raise the charges for medical practice throughout the association, and to collect accounts twice a year. It was also agreed to exact *double fee* when called to take charge of obstetrical cases in the management of *irregular practitioners*.

Medical Miscellany.—A private school of medicine, called the New Jersey Medical Institute, has been opened at Burlington, N. J., offering flattering prospects to pupils, who are to visit the Philadelphia hospitals twice a week. — Dr. Yandell's history of the medical department of the University of Louisville, Ky., is a valuable historical document. — A letter from St. Jago de Cuba, Dec. 18th, states that since the 18th of October last, that city had lost by cholera alone, at least one-tenth of its population. Business was dull, with but little doing among the shipping, and the few cargoes recently arrived from the United States scarcely met with sale at any price. — In Salem Mass., 467 persons died in 1852: 22 of the number were 80 years old and upwards.—Influenza is prevalent at Washington, and cholera at Charleston, S. C. — One hundred and nineteen students are in attendance on the present term of lectures at the Mass. Med. College.—Cholera made its appearance at Ningpo, China, not long ago, and swept the people off with melancholy rapidity, many having died within five hours after the attack.—Dr. Hatch has organized a medical school on the eclectic plan in Boston. There are now three schools besides the regular ones—viz., the Female Medical School, the Reformed, and the Eclectic, — and each of them, we suppose, have students. — Who is the best surgical instrument maker? is a question we cannot answer.—Dr. Mattson is said to be reaping a profitable harvest from his new and much approved syringe. It is worth half a dozen circles of tolerably profitable practice. "There is a tide in the affairs of men," and this is one of them. —Ninety-three students were in attendance on the lectures of the Homœopathic College, in Philadelphia, the last term.—There were 21,458 deaths in the city of New York during the year 1852 — three persons were over 100 years of age.

MARRIED,—At New York, Edward Shippen, M.D., U. S. N., to Miss M. K. Learning.

DIED,—In Dover, Vt., Otis Howe, M.D., 22.

Deaths in Boston—for the week ending Saturday noon, Jan. 22d, 52.—Males, 46—females, 36. Apoplexy, 1—disease of brain, 1—consumption, 16—convulsions, 1—croup, 11—dysentery, 3—dropsy, 2—dropsy in head, 5—infantile diseases, 9—puerperal, 1—erysipelas, 2—typhoid fever, 1—scarlet fever, 12—hooping cough, 1—disease of the heart, 2—disease of kidneys, 2—inflammation of lungs, 5—marasmus, 2—old age 1—rheumatism, 1—pleurisy, 2—scald, 1.

Under 5 years, 49—between 5 and 20 years, 10—between 20 and 40 years, 10—between 40 and 60 years, 8—over 60 years, 5. Born in the United States, 66—Ireland, 10—England, 1—Br. America, 3, Germany, 2. The above includes 7 deaths at the City Institutions.

A Large Thimble in the Posterior Nares, which for some time escaped detection—A little boy, aged two and a half years, whose name I do not now recollect, was brought to me from Pickway county, about four weeks since, for advice. The father informed me that about two weeks previously the little fellow had swallowed a thimble, or rather, that a thimble had accidentally passed into his fauces. His mother, alarmed at the symptoms of strangulation produced by the foreign body resting upon the glottis, passed her finger into his throat, and in her endeavors to secure its removal she felt it distinctly glide upwards behind the palate. The boy now breathed again with perfect ease, but being certain of its lodgment in the part alluded to, she applied to a physician, who, on examination, could not detect its presence there, and expressed his opinion that there was no foreign body in the nares. Another physician was consulted, who advised that the child be brought to me.

On examination of the fauces, I saw no indications of a foreign body. They appeared in a healthy state. The articulation, however, was abnormal. He spoke like a child with a cleft palate—the air passing freely through both nostrils. I passed a blunt hook through the mouth into the posterior nares, and detected nothing like a foreign body. I then passed a probe through both nostrils into the fauces with similar results. Convinced that the thimble was still in the nose, I passed a large silver female catheter through the right nostril, and keeping the extremity firmly pressed against the side of the posterior nares it distinctly struck a solid foreign body, which, with considerable difficulty, I pushed down into the fauces, when the child retching violently, threw a very large steel, brass bound thimble from his mouth. It seemed that the cylinder of the thimble, open at both ends, was lying parallel with the posterior nares, and firmly impacted within them, the air passing freely through this metallic tube. Its continued presence must have produced the most disastrous consequences. — *The Ohio Med. and Surg. Journal.*

Influence of Vaccination and Re-vaccination.—By C. HOLMAN, M.D., Reigate.—A family of four children, whose ages varied from twelve to three years, became exposed to the contagion of variola from a man (whether vaccinated or not I am not aware) falling with that disease when lodging in the house. Up to this time the parents had pertinaciously refused all attempts at vaccinating their children, with the exception of the eldest.

About the seventh day after the appearance of the disease in the lodger, the following was the state of affairs when the medical man was called in :

No. 1. The eldest, who had been vaccinated successfully when an infant, was attacked with variola, but in a very modified or varioloid form, the constitutional disturbance being but slight, and the convalescence speedy.

Nos. 2, 3, and 4, were immediately vaccinated.

Nos. 2 and 3 had vaccinia very favorably, and did *not* take variola.

No. 4 failed at the first vaccination, but on its again being tried it succeeded, and ran its usual course ; during its progress variola made its appearance in a very mitigated form : the constitutional symptoms were slight, and no trace of the child ever having had the disease remained — *London Lancet.*

A new work by Dr. Marshall Hall has just been published in London, on the nervous system and its diseases.

